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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
	Application No.		
Office Action Commence	10/678,336	BOUCHER ET AL.	
Office Action Summary	Examiner	Art Unit	
	MON CHERI S. DAVENPORT	2462	
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the c	orrespondence address	
A SHORTENED STATUTORY PERIOD FOR REPL' WHICHEVER IS LONGER, FROM THE MAILING D. - Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period of Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from a, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).	
Status			
1) ☐ Responsive to communication(s) filed on <u>26 C</u> 2a) ☐ This action is FINAL . 2b) ☐ This 3) ☐ Since this application is in condition for allowal closed in accordance with the practice under E	s action is non-final. nce except for formal matters, pro		
Disposition of Claims			
4) ☑ Claim(s) 1-27 is/are pending in the application 4a) Of the above claim(s) is/are withdra 5) ☐ Claim(s) is/are allowed. 6) ☑ Claim(s) 1-27 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/o	wn from consideration.		
Application Papers			
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) acc Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Examine 10.	epted or b) objected to by the I drawing(s) be held in abeyance. See tion is required if the drawing(s) is objected to by the I	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the prio application from the International Burear * See the attached detailed Office action for a list	ts have been received. ts have been received in Applicati rity documents have been receive u (PCT Rule 17.2(a)).	on No ed in this National Stage	
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)	4) Interview Summary Paper No(s)/Mail Do	ate	
3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	5) Notice of Informal P	atent Application	

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Art Unit: 2462

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22 and 23 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The broadest reasonable interpretation of a claim drawn to a computer readable medium (also called machine readable medium and other such variations) typically

covers forms of non-transitory tangible media and transitory propagating signals per se in view of the ordinary and customary meaning of computer readable media, particularly when the specification is silent. See MPEP 2111.01.

When the broadest reasonable interpretation of a claim covers a signal per se, the claim must be rejected under 35 US.C. § 101 as covering non-statutory subject matter. See In re Nuijten, 500 F.3d 1346, 1356-57 (Fed. Cir. 2007) (transitory embodiments are not directed to statutory subject matter) and Interim Examination Instructions for Evaluating Subject Matter Eligibility Under 35 USC § 101, Aug. 24, 2009; p. 2.

A claim drawn to such a computer readable medium that covers both transitory and non-transitory embodiments may be **amended** to narrow the claim to cover only statutory embodiments to avoid a rejection under 35 USC § 101 by adding the limitation "**non-transitory**" to the claim. Cf Animals - Patentability, 1077 Off. Gaz. Pat. Office 24 (April 21, 1987)(suggesting that applicants add the limitation "non-human" to a claim covering a multicellular organism to avoid a rejection under 35 USC § 101).

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Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 3. Claims 1-13, 17-22, and 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Kerr et al. (US Patent 6,243,667) in view of Willkie et al. (US Patent 6,683, 851).

Regarding **Claim 1** Kerr et al. discloses a method of identifying multiple packets in a communication flow between a source entity and a destination entity, comprising (see figure 2, message flow patterns):

storing, in a network interface for the destination entity, a first flow identifier of a first packet received from a source entity for a destination entity, wherein said first flow identifier comprises an identifier of the source entity and an identifier of the destination entity (see col. 3, lines 57-67, flow identifying, identifying a flow for the packet, see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination, see col. 1, lines 62-66, the collected information is reported to devices on the network(reads on network interface devices for the destination entity as broadly claimed), see also figure 1, section 540 reporting device);

storing, in said network interface said first packet in a packet memory for transfer toward the destination entity; storing in said network interface a second flow identifier of a second

packet (see col. 6, lines 32-42, flow cache (memory), stores the flow identifiers, see col. 3, lines 56-67, the router stores the packet for transfer to the destination);

storing in said network interface said second packet in said packet memory; determining whether said first flow identifier matches said second flow identifier (see col. 3, lines 55-67, the router stores packets, and identifies the message flow using the flow identifier of the header);

storing a first indicator in the destination entity if a first communication flow identified by said first flow identifier comprises said second packet; (see col. 7, lines 56-57, collecting and reporting information about messages flow, reporting reads on a indicator), see col. 8, lines 35-56, the routing device transmits the information packet about message flows (including the flow identified) to a destination device, see col. 4, lines 1-7, the routing device look up the flow cache to determine a flow, results are identified or new) and

storing a second indicator in the destination entity if said first packet is the only packet stored in the packet memory that is part of said first communication flow(see col. 7, lines 56-57, collecting and reporting information about messages flow, reporting reads on a indicator), see col. 8, lines 35-56, the routing device transmits the information packet about message flows(including when the flow identified includes only one packet) to a destination device, see col. 4, lines 1-7, the flow is identified as new if the first packet only packet part of the communication flow).

Kerr et al. fail to explicitly state storing a first indicator in the destination entity, and storing a second indicator in the destination entity as claimed.

However Willikie et al. teaches storing a first indicator in the destination entity, and storing a second indicator in the destination entity (see col. 3, lines 45-65, Willikie et al. teaches a QMIP unit which receives and stores data from a set of modules, which comprises a memory which stores a received flow control indication from each module, the flow indicator indicates if transmission of data is to cease, the QMIP creates a frame which carries data information and flow control indication, the QMIP forward frame over the common data link).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Willikie et al. invention because Willikie et al. transfers data between multiple entities over a serial link in a efficient manner (see Willikie et al. see col. 3, lines 38-41)

Regarding Claims 3 and 22 Kerr et al. discloses a method of identifying one or more packets in a communication flow between a source entity and a destination entity, comprising:

receiving a first packet at a communication device that is a network interface for a host computer (see col. 3, lines 55-56, receives a packet, see figure 1, section 140, routing device);

identifying by said network interface a first communication flow comprising said first packet with a first flow identifier configured to identify both the source entity and the destination entity(see col. 3, lines 57-67, flow identifying, identifying a flow for the packet, see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);

determining by said network interface whether said first communication flow also comprises a second packet received at said communication device after said first packet was

received at said communication device (see col. 3, lines 49-67, the router determines the message flow of the received packets); and

transferring said first packet to a host computer for processing in accordance with a communication protocol associated with said first packet (see col. 8, lines 35-59, the router build an information packet which is then sent to a destination device (host computer), in accordance to a communication protocol, for processing, see col. 2-3, lines 50-2, the router, processes in accordance to a transmission protocol type of the first packet).

Kerr et al. fail to explicitly point out transferring said first packet to a host computer as claimed.

However Willikie et al. teaches transferring said first packet to a host computer (see col. 3, lines 60-65, the QMIP unit creates a frame which carries data information and flow control information and forwards the frame over the common data link to a host computer (entity).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Willikie et al. invention because Willikie et al. transfers data between multiple entities over a serial link in a efficient manner (see Willikie et al. see col. 3, lines 38-41).

Regarding Claims 2 and 24 Kerr et al. discloses everything as applied above (see claims 1 and 3).

prior to said storing a first flow identifier, parsing said first packet to retrieve said identifier of the source entity and said identifier of the destination entity (see col. 3, lines 56-67, the routing device examines a header for the packet, to retrieve identifiers).

Regarding Claim 4 Kerr et al. discloses everything as applied above (see claim 3).

transferring said second packet to said host computer (see col. 3, lines 55-56, the router receive packet, by definition the router receives packet than forwards the packet to destination);

wherein said host computer is configured to collectively process a header portion of said first packet and a header portion of said second packet in accordance with said communication protocol (see col. 2-3, lines 50-2, the router, processes in accordance to a transmission protocol type of the first packet, see col. 3, lines 57-67, the header is examined, the destination device (host computer) will process the packet likewise).

Regarding **Claims 5 and 18** Kerr et al. discloses everything as applied above (see claims 3 and 16).

wherein said identifying comprises:

receiving a flow key generated by concatenating an identifier of the source entity and an identifier of the destination entity(see col. 6, lines 32-41, the flow keys, with information about message flows to include the source and the destination flow identifiers);

wherein said first flow identifier comprises said flow key(see col. 6, lines 32-41, the flow cache includes the flow keys about the messages flows).

Regarding Claims 6 and 17 Kerr et al. discloses everything as applied above (see claims 3 and 16).

wherein said identifying comprises:

receiving an index of said first communication flow in a flow database; wherein said first flow identifier comprises said index(see1 col. 6, lines 31-49, the flow cache had a buckets of entries, of a database flow, which comprises a four-byte pointer(reads on index)).

Regarding Claim 7 Kerr et al. discloses everything as applied above (see claim 3).

wherein said determining comprises comparing said first flow identifier with a second flow identifier associated with a second packet received at said communication device (see col. 4, lines 1-7, the routing device performs lookup in a flow cache comparing the flow identifiers with second packet to determine message flows).

Regarding Claim 8 Kerr et al. discloses everything as applied above (see claim 7). wherein said determining further comprises:

storing said first flow identifier in a flow memory(see col. 6, lines 29-50, the flow cache stores the flow identifiers in a flow memory); and

storing said second flow identifier in said flow memory(see col. 6, lines 29-50, the second flow identifier is stored); and

comparing said stored first flow identifier and said stored second flow identifier (see col. 4, lines 1-7, the message flow is identified by comparing flow identifiers).

Regarding Claim 9 Kerr et al. discloses everything as applied above (see claim 8).

wherein said flow memory is an associative memory in said communication device (see figure 3, section 300 flow caches).

Regarding Claim 10 Kerr et al. discloses everything as applied above (see claim 3).

storing said first packet in a packet memory (see col. 7, lines 59-61, collecting information about message flow patterns, to include, see col. 8, lines 4-16, collecting (storing) actual data, packets transmitted as part of the flow itself) see col. 2, lines 40-45, the router stores the packet in its memory).

Regarding Claim 11 Kerr et al. discloses everything as applied above (see claim 10).

wherein said determining comprises comparing said first flow identifier configured to identify said first communication flow with a second flow identifier configured to identify a second communication flow comprising a packet stored in said packet memory (see col. 4, lines 1-7, the message flow is identified by comparing flow identifiers, if new flow is determined or old message flow).

Regarding Claim 12 Kerr et al. discloses everything as applied above (see claim 3).

Informing said host computer of said transfer of said first packet (see col. 7, lines 59-61, collecting information about message flow patterns, to include, see col. 8, lines 4-16, collecting (storing) actual data, packets transmitted as part of the flow itself, see col. 8, lines 35-46, the host (destination device is informed of message flow which includes transferring of packets)

Regarding Claim 13 Kerr et al. discloses everything as applied above (see claim 12).

said informing comprises configuring an indicator in a host memory(see col. 8, lines 23-51,the destination device(host compute is sent a information packet(indicator) in which is builds a database(reads on host memory)).

Regarding Claim 19 Kerr et al. discloses everything as applied above (see claim 16).

wherein said packet memory comprises said flow memory (see col. 3, lines 40-48, the routing device (packet memory, maintains the flow cache)).

Regarding Claim 20 and 27 Kerr et al. discloses everything as applied above (see claims 16 and 3).

storing a first indicator in a host memory if said communication flow comprises said second packet; and storing a second indicator in said host memory if said first packet is the only packet in said packet memory that is part of said communication flow (see col. 4, lines 1-7, the message flow is identified by comparing flow identifiers, if new flow is determined or old message flow).

Regarding Claims 21, 25 and 26 Kerr et al. discloses a communication interface, comprising:

a header parser configured to parse a header of a first packet received at the communication interface, wherein the first packet was issued from a source entity for a destination entity, and the communication interface is attached to the destination entity (see col.

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3, lines 57-67, the router device examines the headers of the received packets, see figure 1, communication interface attached via a communication link);

a flow database configured to facilitate management of a communication flow comprising the first packet, the flow database comprising (see1 col. 6, lines 31-49, the flow cache had a buckets of entries, of a database flow, which comprises a four-byte pointer (reads on index)):

a flow key configured to identify the communication flow using identifiers of the source entity and the destination entity (see col. 6, lines 32-36, the flow cache, comprise a memory which associated flow keys which include the source and the destination);

an activity indicator configured to indicate a recency with which a packet in the communication flow has been received (see col. 5, lines 51-54, at step 241, the routing device examines, in the flow cache and compares the current time with the last time a packet was routed using a particular entry); and

a validity indicator for indicating whether the communication flow is valid (see col. 3, lines 39-49, the routing device maintains the flow cache and remove message flow that are no longer valid. Indicating message flow is no longer valid);

a code generator configured to generate an operation code for the first packet, to facilitate forwarding of the first packet toward the destination entity(see col. 6, lines 29-41, the flow cache has flow keys that reads on operation code, which includes information about a particular message flow); and

a packet batching module configured to determine whether a second packet received at the communication interface is part of the communication flow(see col. 3-4, lines 57-7, the router device identifies a message flow by comparing received packets).

Claim Rejections - 35 USC § 103

1. Claims 14-16 and 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Kerr et al. in view of Davies et al. (US Patent 5,819,111).

Regarding Claim 14 Kerr et al. discloses everything as applied above (see claim 13).

Kerr et al. fails to specifically point out wherein said indicator is configured to indicate that said host computer should delay processing said first packet until said second packet is transferred to said host computer as claimed.

Davies et al. teaches wherein said indicator is configured to indicate that said host computer should delay processing said first packet until said second packet is transferred to said host computer (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16)

Regarding Claim 15 Kerr et al. discloses everything as applied above (see claim 13).

Kerr et al. fails to specifically point out wherein said indicator indicates that said host computer should not delay processing said first packet as claimed.

Davies et al. teaches out wherein said indicator indicates that said host computer should not delay processing said first packet (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller, otherwise do not delay)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16).

Regarding Claim 16 Kerr et al. discloses a method of transferring a packet from a network interface to a host computer, comprising:

receiving a first packet at a network interface for a host computer (see col. 3, lines 55-56, receives a packet, see figure 1, section routing device);

storing said first packet in a packet memory see col. 3, lines 55-67, the router stores packets)

receiving a first flow identifier configured to identify a communication flow comprising said first packet(see col. 3, lines 57-67, flow identifying, identifying a flow for the packet, see

col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);

storing said first flow identifier in a flow memory(see col. 6, lines 29-41, the flow cache, stores the flow identifiers, including the source and the destination);

searching said flow memory for a second packet in said communication flow received at the network interface after said first packet (see col. 3, lines 49-67, the router determines the message flow of the received packets);

transferring header of said first packet to said host computer(see col. 8, lines 35-59, the router builds an information packet which is then sent to a destination device (host computer), in accordance to a communication protocol, for processing, see col. 2-3, lines 50-2, the router, processes in accordance to a transmission protocol type of the first packet, see col. 3, lines 57-60, routing device examines the header); and

Kerr et al. fails to specifically point out configuring an indicator in a host memory to indicate whether processing of said first packet by said host computer should be delayed to await transfer of said second packet to said host memory as claimed.

Davies et al. teaches configuring an indicator in a host memory to indicate whether processing of said first packet by said host computer should be delayed to await transfer of said second packet to said host memory (See col 4, lines 8-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller, otherwise do not delay).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16)

Regarding Claim 23 Kerr et al. discloses a processor readable storage medium containing a data structure configured to store information concerning a packet to be transferred from a network interface to a host computer, the data structure including one or more entries, each entry comprising:

a flow number configured to identify a communication flow comprising a first packet received at the network interface from a source entity for a destination entity associated with the host computer(see col. 6, lines 29-41, the flow cache has flow keys that reads on flow number); and

a validity indicator configured to provide (see col. 3, lines 39-49, the routing device maintains the flow cache and remove message flow that are no longer valid. Indicating message flow is no longer valid);

wherein said data structure is searched for a second entry containing said flow number when said first packet is transferred to the host computer to determine if said communication flow also comprises a second packet received at the network interface after said first packet (see col. 3-4, lines 57-7, the routing device identifies a message flow, the packets are compared to determine if is part of a message flow).

Kerr et al. fails to specifically point out a first indication if said first packet is free of errors and ready for transfer to the host computer; and a second indication if said first packet is a control packet as claimed;

Davies et al teaches a first indication if said first packet is free of errors and ready for transfer to the host computer (See col 4, lines 1-13, The disabling step can include checking if a run length encoded data transfer is pending from the host, and if so, delaying disabling of the data transfers from the host to the peripheral until a data byte associated with the run length encoded data is received by the interface controller, otherwise do not delay, the disabling step reads on an indication, and control status flag indicates that the data is ready, error free and pending)

a second indication if said first packet is a control packet (see col. 3, lines 28-41, method can include after execution of the step of transferring a data block, either setting the interface controller to disable acknowledgment of receipt of data if a flow control status flag indicates pending flow stop, receiving of control packets)

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to combine Kerr et al. invention with Davies et al. invention because Davies et al. invention provides provide methods and apparatus for reducing the complexity of programming on the peripheral side of an IEEE interface (see Davies et al. col. 3, lines 10-16).

Response to Arguments

Applicant's arguments filed 10/26/2010 have been fully considered but they are not persuasive.

In the remarks on pg. 10 of the amendment, the applicant contends that Kerr in view of Willkie does not teach or suggest "storing, in a network interface for the destination entity, a first flow identifier"

Examiner respectfully disagrees Kerr teaches in figure 1, the routing device and the reporting device, which stores the flow identifier for the destination entity.

In the remarks on pg. 11 of the amendment, the applicant contends that Kerr in view of Willkie does not teach or suggest "a communication device that is a network interface for a host computer"

Examiner respectfully disagrees Kerr teaches in figure 1, the routing device, which is a network interface for a host computer, as it interfaces with the network devices.

In the remarks on pg. 19 of the amendment, the applicant contends that Kerr in view of Davies does not teach or suggest "transferring a header of said first packet to said host computer; and configuring an indicator in a host memory to indicate whether processing of a remainder of said first packet by said host computer should be delayed to await transfer of said second packet to said host memory"

Examiner respectfully disagrees Kerr teaches, the router builds an information packet (including the header) which is then sent to a destination device (host computer), in accordance to a communication protocol, for processing. Davies teaches an indicator is configured relate to the determination if a delay is required or not depending on a data transfer pending of a encoded data flow.

In the remarks on pg. 21 of the amendment, the applicant contends that Kerr in view of Davies does not teach or suggest "a first indication if said first packet is free of errors and ready for transfer to the host computer"

Examiner respectfully disagrees Davies teaches the disabling step reads on a first indication, and the control status flag indicates that the data is ready, error free and pending.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MON CHERI S. DAVENPORT whose telephone number is (571)270-1803. The examiner can normally be reached on Monday - Friday 8:00 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Art Unit: 2462

/Kevin C. Harper/ Primary Examiner, Art Unit 2462

/Mon Cheri S Davenport/ Examiner, Art Unit 2462 January 9, 2011